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10/776,006	10/12/2004	David Paul Yach	1578.120 (11428-5-US-PAT)	9101
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/776,006	Applicant(s) YACH ET AL.	
	Examiner JARED M. BIBBEE	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-8, 10-17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 10-17, 19, and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

1. This Office Action has been issued in response to amendment filed on 5 May 2009. Claims 5, 9, and 18 are cancelled. Claims 1-4, 6-8, 10-17, 19, and 20 are pending. Applicants' arguments have been carefully and respectfully considered in light of the instant amendment and are persuasive, as they relate to the claim rejections under 35 U.S.C. 101 and 103. However, after further search and consideration a new grounds of rejection has been necessitated due to the amendments. Accordingly, this action has been made FINAL.

Claim Objections

2. Claims 1 and 15 are objected to because of the following informalities: Both claims 1 and 15 recite two different spellings of the word database ("database" and "data base"). Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4, 6-8, 10-17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rybicki et al (US 7,359,920) in view of Watanabe et al (US 2002/0059281), and further in view of Hsing et al (US 2002/0023113 A1).

With respect to independent claim 1, Rybicki teaches a method for a radio communication system comprising a network part, having a network copy of a database maintained thereat and a mobile node, having a corresponding a mobile copy of the database maintained thereat, the network copy of the database and the mobile copy of the database each being comprised of a plurality of data records with each record being comprised of at least one data field, said method for determining whether the network copy of the database matches the mobile copy of the database, said method for synchronizing the network copy database and the mobile copy database to each other, the method comprising the steps of:

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- receiving a synchronization initiation message at the mobile node (*see column 1, lines 57-63*);
- responsive to the synchronization initiation message, forming, in an individual record hash generator at the mobile node, individual record hash values from individual records of the mobile copy of the first data base (*see column 2, lines 22-41*);
- determine whether the first set of individual record hash values in the network copy database matches the first set of individual record hash values in the mobile copy of the database (*see column 2, lines 22-41 and column 8, lines 8-19*); and
- responsive to a determination that the hash value from the mobile node does not match a corresponding hash value for the network part, communicating individual record hash values from the mobile node to the network part (*see column 8, lines 8-19*).

Rybicki does not appear to explicitly disclose responsive to the synchronization initiation message, forming, in a group hash generator at the mobile node, a group hash value from a first set of the individual record hash values formed by the individual record hash generator, the group hash value for the first set of individual record hash values being assigned a group identifier, the group identifier identifying the first set of individual record hash values from which the group hash value was formed, the group hash value and the group identifier, being communicated by the mobile node to the network part whereat the group hash value from the mobile node for the first set, is compared to a group hash value calculated at the network part for a corresponding network copy of the first set of individual record hash values.

However, Watanabe teaches the ability to group words (identifiers) and their associated hash values into a hash value that represents the group due to the commonality/similarity of the

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words (*see [0017], [0018] and [0027]*). For example, similar words (identifiers) are grouped together and associate a single (group) hash value because the hash value is similar for all the similar words.

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki to incorporate the hash grouping of Watanabe for the purpose of responsive to the synchronization initiation message, forming, in a group hash generator at the mobile node, a group hash value from a first set of the individual record hash values formed by the individual record hash generator, the group hash value for the first set of individual record hash values being assigned a group identifier, the group identifier identifying the first set of individual record hash values from which the group hash value was formed, the group hash value and the group identifier, being communicated by the mobile node to the network part whereat the group hash value from the mobile node for the first set, is compared to a group hash value calculated at the network part for a corresponding network copy of the first set of individual record hash values.

The suggestion/motivation for doing so would have been to increase the retrieval of data by avoiding the identification of duplicate data (*see [0007] and [0008]*).

The combination of Rybicki and Watanabe fail to explicitly recite wherein the network copy database and the mobile copy database are both comprised of text formatted databases utilizing an Extensible Mark-Up Language (XML) format.

However, Hsing teaches databases are comprised of text formatted databases utilizing an Extensible Mark-Up Language (XML) format (*see [0019]*).

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki and Watanabe to incorporate the XML databases of Hsing for the purpose of having both the network copy database and the mobile copy database comprised of text formatted databases utilizing an Extensible Mark-Up Language (XML) format.

The suggestion/motivation for doing so would have been to reduce the amount of information necessary to fully describe the changes to the database (*see [0008]*).

With respect to dependent claim 2, Rybicki teaches further therein the individual record hash generator at the mobile node, generates individual record hash values from portions of selected data records within the mobile node (*see column 2, lines 22-41*).

With respect to dependent claim 3, Rybicki teaches further an individual record hash buffer coupled to the individual record hash generator is adapted to receive the individual record hash values representative formed by said individual record hash generator, said individual record hash buffer buffering the individual hash record values representative of the individual record hash values (*see column 2, lines 22-41*).

With respect to dependent claim 4, Rybicki teaches further the individual record hash values formed by said individual record hash generator and by said group hash generator are selectably communicated to the network part in response to a message received from the network part in order to determine whether the network copy of the first database and the mobile copy of the first database match one another (*see column 2, lines 22-41 and column 8, lines 8-19*).

With respect to dependent claim 6, Rybicki teaches further the individual record hashes formed by said individual record hash generator are communicated to the network part upon receipt of a message from the network par that indicates that a determination was made that the

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network copy of the database and the mobile copy of the database are out of match with one another (*see column 2, lines 22-41 and column 8, lines 8-19*).

With respect to dependent claim 7, Rybicki teaches further determination is performed at the network part and wherein said method further comprises the step of a detecting a mismatch between individual record hash values formed at the mobile node and individual record hash values formed at the network part (*see column 2, lines 22-41 and column 8, lines 8-19*).

With respect to dependent claim 8, Rybicki teaches further the step of buffering in an individual record hash buffer, an individual record hash values that are representative of individual record hash values formed by said individual record hash generator, the values representative of the individual record hash values being capable of being retrieved from said buffer for communication to the network part (*see column 2, lines 22-41 and column 8, lines 8-19*).

With respect to dependent claim 10, Watanabe teaches further the step of generating a message in a message generator that is adapted to receive indications of the group hash value and the group identifier associated therewith, said message generator forming a message formatted to include both the group hash value and the group identifier (*see [0017], [0018] and [0027]*).

With respect to dependent claim 11, Rybicki teaches further determining in a determiner located at the network part, whether a hash formed in and received from the mobile node matches a network generated hash value formed at the network part (*see column 2, lines 22-41 and column 8, lines 8-19*).

Rybicki does not appear to explicitly disclose grouping hash values.

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However, Watanabe teaches the ability to group words (identifiers) and their associated hash values into a hash value that represents the group due to the commonality/similarity of the words (*see [0017], [0018] and [0027]*). For example, similar words (identifiers) are grouped together and associate a single (group) hash value because the hash value is similar for all the similar words.

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki to incorporate the hash grouping of Watanabe for the purpose of determining in a determiner located at the network part, whether a hash formed in and received from the mobile node matches a network generated hash value formed at the network part.

The suggestion/motivation for doing so would have been to increase the retrieval of data by avoiding the identification of duplicate data (*see [0007] and [0008]*).

With respect to dependent claim 12, Rybicki teaches further a requester located at the network part and which is coupled to said determiner, receives indications of determinations that the hash value formed in the mobile node does not match the hash value formed at the network part, said requestor then requesting additional information associated with the at least the first mobile copy database (*see column 2, lines 22-41 and column 8, lines 8-19*).

Rybicki does not appear to explicitly disclose grouping hash values.

However, Watanabe teaches the ability to group words (identifiers) and their associated hash values into a hash value that represents the group due to the commonality/similarity of the words (*see [0017], [0018] and [0027]*). For example, similar words (identifiers) are grouped

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together and associate a single (group) hash value because the hash value is similar for all the similar words.

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki to incorporate the hash grouping of Watanabe for the purpose of determining in a determiner located at the network part, whether a hash formed in and received from the mobile node matches a network generated hash value formed at the network part.

The suggestion/motivation for doing so would have been to increase the retrieval of data by avoiding the identification of duplicate data (*see [0007] and [0008]*).

With respect to dependent claim 13, Rybicki teaches further the additional information selectably requested by said requestor comprises individual record hash values (*see column 2, lines 22-41 and column 8, lines 8-19*).

With respect to dependent claim 14, Rybicki teaches further said determiner is further adapted to receive values of the individual record hash values communicated to the network part by the mobile node, said determiner determining whether values of the individual record hash values correspond with corresponding network generated individual record hash values (*see column 2, lines 22-41 and column 8, lines 8-19*).

With respect to independent claim 15, Rybicki teaches a method for a radio communication system comprising a network part having at least a network copy, a database maintained thereat, and a mobile node having a corresponding mobile copy of the database maintained thereat, data of the first network copy database and the first mobile copy database being in match with one another when data of each data record of the network copy of the

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database is in complete correspondence with corresponding data of each data record of the mobile copy of the database, said method for determining whether the network copy of the database is in match with the mobile copy of the database, said method comprising:

- receiving at the mobile node from the network part a synchronization initiation message *(see column 1, lines 57-63)*;
- responsive to receipt of the synchronization message, forming in a mobile node, individual record hashes of individual data records of a first selected group of data records of the mobile copy of the data base *(see column 2, lines 22-41)*;
- assigning a identifier to the individual record formed from the first selected data record of the mobile copy of the data base *(see column 2, lines 22-41)*;
- forming in the mobile node, a hash value from the individual record identified by said identifier *(see column 2, lines 22-41)*;
- sending the hash value and the identifier, from the mobile node to the network part *(see column 8, lines 8-19)*;
- at the network part, comparing the hash value received from the mobile node with a corresponding network generated hash value formed at the network part from corresponding network copies of individual record hashes identified by the identifier received from the mobile node *(see column 2, lines 22-41 and column 8, lines 8-19)*; and
- determining whether the hash value from the mobile corresponds in value with the corresponding network generated hash value and determining therefrom whether the network copy and the mobile node copies of the database match each other *(see column 2, lines 22-41 and column 8, lines 8-19)*, and

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- communicating individual record hash values from the mobile node to the network part in response to a determination that the hash value from the mobile node does not match a corresponding hash value for the network part (*see column 2, lines 22-41 and column 8, lines 8-19*).

Rybicki does not appear to explicitly disclose grouping hash values.

However, Watanabe teaches the ability to group words (identifiers) and their associated hash values into a hash value that represents the group due to the commonality/similarity of the words (*see [0017], [0018] and [0027]*). For example, similar words (identifiers) are grouped together and associate a single (group) hash value because the hash value is similar for all the similar words.

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki to incorporate the hash grouping of Watanabe for the purpose of grouping hash values into a single value for a group of data.

The suggestion/motivation for doing so would have been to increase the retrieval of data by avoiding the identification of duplicate data (*see [0007] and [0008]*).

The combination of Rybicki and Watanabe fail to explicitly recite wherein the network copy database and the mobile copy database are both comprised of text formatted databases utilizing an Extensible Mark-Up Language (XML) format.

However, Hsing teaches databases are comprised of text formatted databases utilizing an Extensible Mark-Up Language (XML) format (*see [0019]*).

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki and Watanabe to incorporate the XML databases of Hsing for

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the purpose of having both the network copy database and the mobile copy database comprised of text formatted databases utilizing an Extensible Mark-Up Language (XML) format.

The suggestion/motivation for doing so would have been to reduce the amount of information necessary to fully describe the changes to the database (*see [0008]*).

With respect to dependent claim 16, Rybicki teaches further the step of identifying the network copy of the database to be in match with the mobile copy database when if the hash value of the mobile node is determined to correspond in value with the corresponding network generated hash value (*see column 2, lines 22-41 and column 8, lines 8-19*).

Rybicki does not appear to explicitly disclose grouping hash values.

However, Watanabe teaches the ability to group words (identifiers) and their associated hash values into a hash value that represents the group due to the commonality/similarity of the words (*see [0017], [0018] and [0027]*). For example, similar words (identifiers) are grouped together and associate a single (group) hash value because the hash value is similar for all the similar words.

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki to incorporate the hash grouping of Watanabe for the purpose of grouping hash values into a single value for a group of data.

The suggestion/motivation for doing so would have been to increase the retrieval of data by avoiding the identification of duplicate data (*see [0007] and [0008]*).

With respect to dependent claim 17, Rybicki teaches further the operation of requesting additional information if the hash value formed in the mobile node is determined to not

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correspond in value with the corresponding network generated hash value (*see column 2, lines 22-41 and column 8, lines 8-19*).

Rybicki does not appear to explicitly disclose grouping hash values.

However, Watanabe teaches the ability to group words (identifiers) and their associated hash values into a hash value that represents the group due to the commonality/similarity of the words (*see [0017], [0018] and [0027]*). For example, similar words (identifiers) are grouped together and associate a single (group) hash value because the hash value is similar for all the similar words.

At the time of the invention it would have been obvious to one of ordinary skill in the art, to modify the teachings of Rybicki to incorporate the hash grouping of Watanabe for the purpose of grouping hash values into a single value for a group of data.

The suggestion/motivation for doing so would have been to increase the retrieval of data by avoiding the identification of duplicate data (*see [0007] and [0008]*).

With respect to dependent claim 19, Rybicki teaches further the operation of sending the values of the individual record hashes to the network part (*see column 2, lines 22-41 and column 8, lines 8-19*).

With respect to dependent claim 20, Rybicki teaches further the operation of comparing the individual record hashes formed at the mobile node, with corresponding individual record hashes formed at the network part (*see column 2, lines 22-41 and column 8, lines 8-19*).

Response to Arguments

5. Applicant's arguments with respect to claims 1-4, 6-8, 10-17, 19, and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JARED M. BIBBEE whose telephone number is (571)270-1054. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. B./

Examiner, Art Unit 2161

/Apu M Mofiz/

Supervisory Patent Examiner, Art Unit 2161